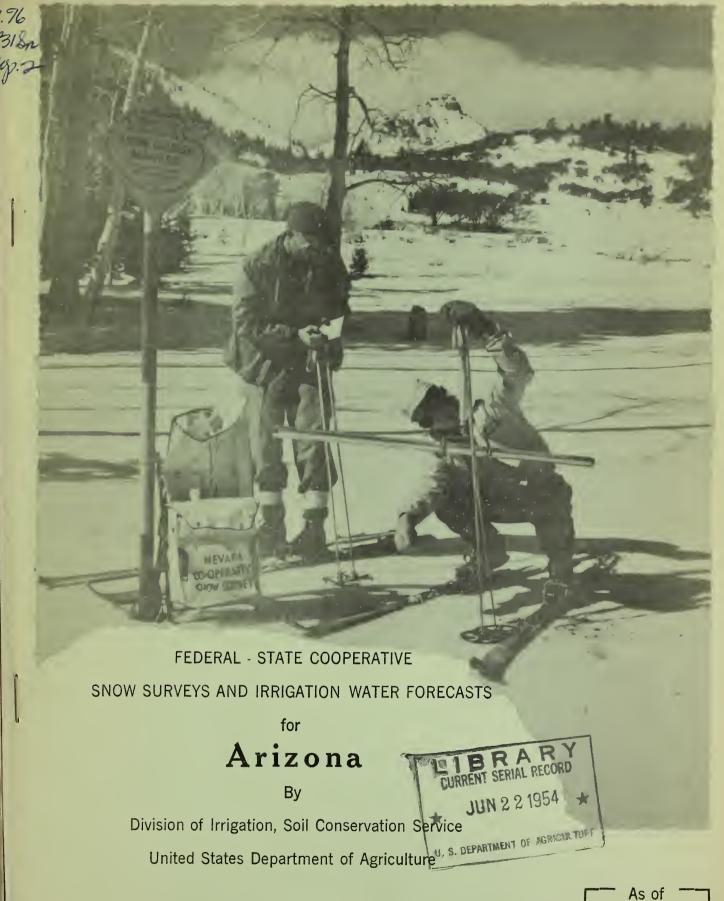
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.





Data included in this report were obtained by the agency named above in cooperation with the Federal, State and local organizations listed on the last page of this report.

FEB. 15, 1952



FEDERAL-STATE COOPERATIVE SHOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR

ARIZONA

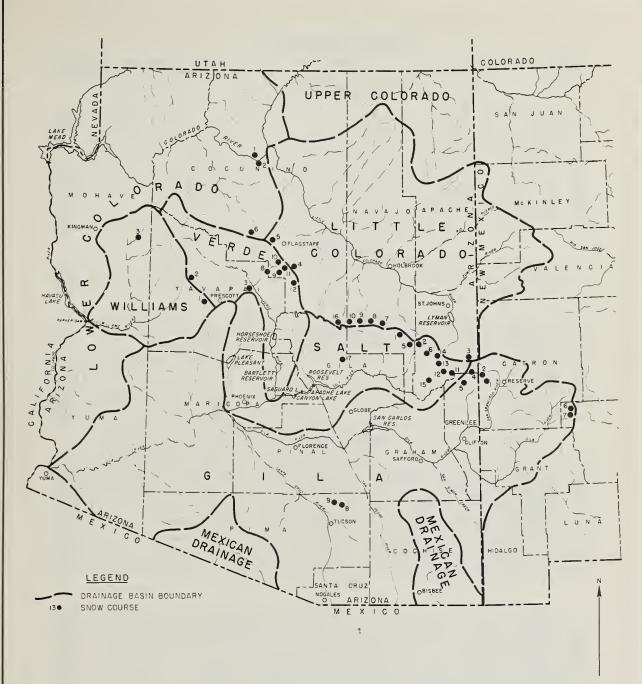
Report Prepared

by

Burke Peterson - Irrigation Engineer

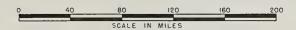
Division of Irrigation Soil Conservation Service Room 24, Post Office Building Phoenix, Arizona





ARIZONA COOPERATIVE SNOW SURVEYS

SNOW COURSES AND DRAINAGE BASINS
JANUARY 1952



INDEX TO SNOW COURSES

NUMB	ER		NAME			ELEVATION			
		LI	TTLE COLORADO	RIVER					
1. 2. 3. 4. 5. 7. 8. 9. 10. 11. 12.	Fort Valley					8,500 7,350 7,350 7,600 7,500 7,500 7,500			
WILLIAMS RIVER									
1. 2. 3.				• • • • •		6,200 5,700 5,000			
	GILA RIVER								
1. 2. 3. 4. 5. 6. 7. 8.	Nutrioso					8,500 8,000 8,000 7,850 7,800 7;300			
1.	Iron Springs			_		6,200			
2. 3. 4. 5. 6. 8. 9. 10. 11.	Camp Wood					5,700 7,100 7,350 7,350 7,100 6,500 6,930 7,300 7,500			
1.	Forest Dale					6,000			
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 16. 17.	McNary	L	DWER COLORADO	RIVER		7,600 7,600 7,500 7,600 8,800 9,050 9,000 9,160 7,640 6,900			
1.									
5.	Fort Valley					• • • 7,350			

WATER SUPPLY OUTLOOK

Arizona February 15, 1952

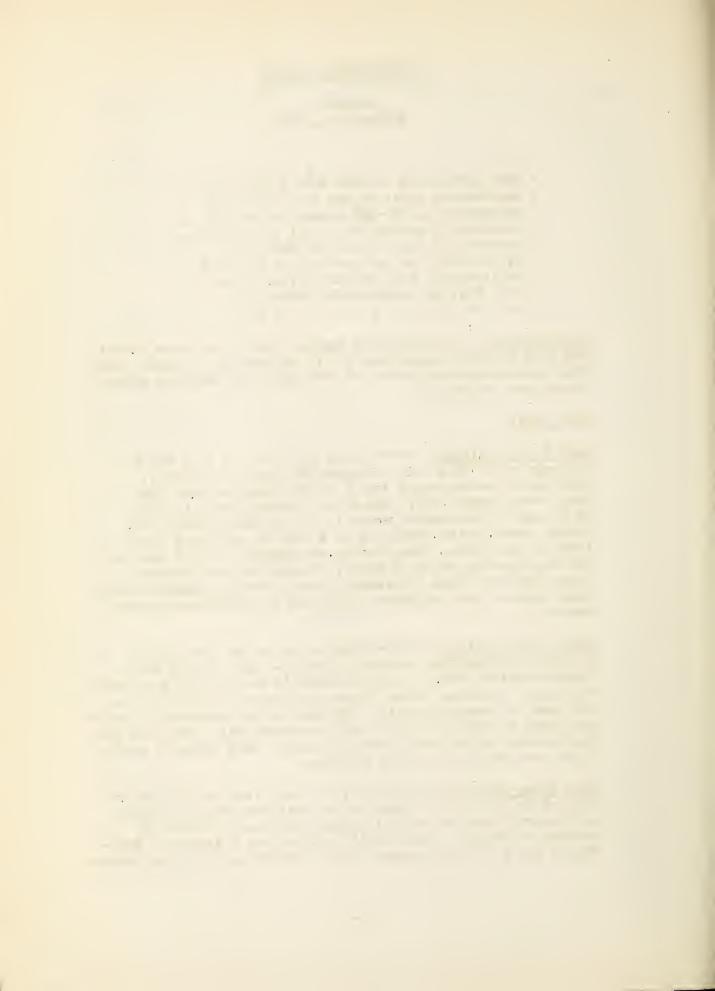
<u>Precipitation:</u> Precipitation during January was above normal and soil moisture conditions on all watersheds are good. Even some areas which are barren of snow have soil moisture conditions near saturation.

Snow Cover:

Salt River Drainage: Snow-stored water on the Salt River Drainage as of this date is about 300 percent of normal. Snow-stored water varies from 1 to 1½ inches at the 7,000 foot level around McNary and down to White River, to over 16 inches of snow-stored water in the Big Lake area at Mt. Baldy. Snow depths average 3 to 4 feet in the 9,000 foot level of Mt. Baldy. Snow depths are between 1 and 2 feet on the Mogollon Rim south of Heber. Courses on the Coronado Trail indicate there is between 3 and 6 inches of snow-stored water there. Soil moisture conditions are excellent on this drainage.

Verde River Drainage: Snow-stored water on the Verde River Drainage is about 200 percent of normal. Snow depths vary from scattered traces on Mingus Mountain to about $2\frac{1}{2}$ feet over on Mormon Mountain. About 9 inches of water is contained in the snow at Mormon Mountain. The bulk of the snow-stored water remaining to run off in the Verde watershed will come from the east slopes of the Verde River Drainage. Soil moisture conditions are excellent on this drainage.

Gila River Drainage: Prospects for runoff into the Gila River are not as good as are those on the Salt and Verde. Present snow-stored water on the Gila River watershed is about 70 percent of normal. There still remains 3 to 6 inches of snow-stored water on the Coronado Trail. However, moving East toward



New Mexico and into the headwaters of the main Gila, the snow-cover diminishes. Soil moisture conditions are generally good on the Gila River, but the snow is not available to produce any encouraging runoff.

Snow-stored water on the Little Colorado is about 200 percent of normal. The Williams River Drainage shows only scattered traces of snow. The North Rim of the Grand Canyon reports four feet of snow and about 15 inches of snow-stored water. The South Rim reports 14 inches of snow and three inches of snow-stored water.

Runoff: Runoff in January added about 480,000 acre feet of water to the Salt River Reservoirs, and about 140,000 acre feet of water to the Verde River Reservoirs. Runoff for this month was well above normal. Since the first of January, the Gila River has added about 150,000 acre feet of water to the San Carlos Reservoir. The forecast for the flow of the Salt River above Roosevelt for the period February through May is 350,000 acre feet, and the forecast for the Verde River above Horseshoe for the period February through April is 110,000 acre feet.

Reservoir Storage: On this date, reservoirs of the State are about 35 percent of capacity. Reservoirs on the Salt and Verde Rivers contain about 117 percent of normal storage. Reservoirs on the Verde River need 100,000 acre feet to be at 100 percent of capacity. The storage in the San Carlos Reservoir on the Gila River is about 63 percent of normal. Largely because of summer and early fall rains, the Carl Pleasant Reservoir on the Agua Fria River is about 67 percent of capacity.

Lake Havasu contains 611,000 acre feet; Lake Mohave, 1,593,000 acre feet; and Lake Mead 17,006,000 acre feet.



TABLE I

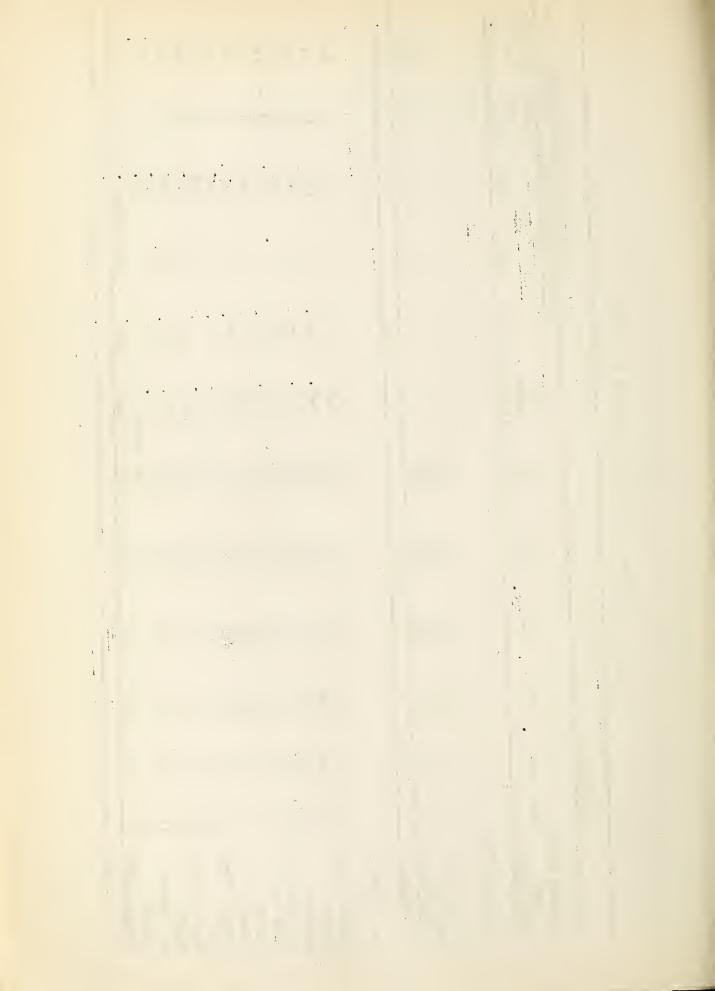
ARIZONA SNOW SURVINS FEBRUARY 15, 1952

URELENTS	Past Record	1	necora (Inches)				5 7.0							se	2.8									4 1.6		2.4
SNOW COVER MEASUREMENTS	[nches]	, d 040[0.2	1.9	0.5	3.9	2.0	3.7	3.4	4.4	5.2	6.3	New Course	3.2		0.7	0.5	0.5	0.5	7.0	N.R.	N.R.	8.0	2.2	0.8
SNO	Conte	ושטר	17/1	0	E	0.2	0	0	⊱	Ţ	E	E	Ŧ	0	T		9.0	0.2	0.2	0	0	1.0	1.1	0.	0.4	0.4
	Water	1952	±775	0.9	1.3	3.1	6.7	8.9	5.2	5.4	7.8		9.5		5.2		0.7	1.4	3.1	5.5	4.3	0	0	0	0	1.7
		Snow Depth	(solitority)	3.8	5.5	10.0	18.5	21.7	13.1	14.7	20.2	Su	28.5	Report	15.1		5.0	4.9	10.0	16.0	12.8	0	0	0	0	5.6
		Date of	(S) Inc	2/15	2/15	2/15	2/14	2/15	2/15	2/15	2/15	No	2/14	No			2/15	2/15	2/15	2/15	2/15	2/15	2/15	2/15	2/15	
		Elev.		0009	7200	8500	7350	7350	0092	0092	7500	0092	7500	7630			3000	8000	8500	8000	3000	7850	7800	7300	8100	
		Rge•		21E	23E	30E	3 3	9 9	15臣	15臣	15臣	14年	8足	9瓦			20W	21W	30E	30E	30E	TOM	MOT	165	16臣	
		Twp.		N6	NS NS	N9	18N	22N	TTN	11N	11N	TIN	18N	17N			63	S)	N9	5N	N [†]	108	1115	125	123	
LOCATION		Sec.		CZ	71	ಬ	13	22	36	28	18	31	77	30			31	9	23	56	13	20	9	15	9	
IC		No.	RIVER	Т	7	ς	4	ν	2	₩	6	10	11	12			٦	7	m	7	2	9	2	w o	5	
		DRAINAGE BASIN and SNOW COURSE	LITTLE COTOPANO RIVER	Forest Dale	McNary	Nutrioso	Mormon Lake	Fort Valley	Gentry	Heber	Canyon Creek	BIK	Mormon Mt.	Happy Jack	Average	GILA RIVER	Frisco Divide	State Line	Nutrioso	Coronado Trail	Beaver Head	Taylor Creek	Inman	Rose Canyon	Bear Mallow	Average

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TABLE I

ARIZONA SNOW SURVEYS FEBRUARY 15, 1952



ARIZONA SWOW SURVEYS FEBRUARY 15, 1952

	Hecord Av.Water Content (Inches)		1.9	2.5	7.0	3.6		2.6	3.4	3.2		2.9		9.3	3.7	2.9	3.6	6.4
MENTS	Years Av. Wate of Conterrected (Inches		99	2	rV n	Λ ι ν	· ~	2	2	~	se			7	7	5	5	
SNOW COVER NERSUREMENTS			0.0	.	3.0	7		7.9	2.7		New Course	2.7		4.5	9. 6	0.3	3.4	3.3
NOW COVE	nt (In			-	.,, .		,	4 (•	•	7							
S	r Conte		00	0	E- C	0	0	0	0	⊱	0	T		3	0	0	0	0.9
	Wate 1952		00	9.0	6.7	9.9		4.9	9.5	9.5		9.4		14.8	2.7	8.9	9.9	7.7
	Snow Depth (Inches)		E O	1.6	18.5	22.0	H	15.7	24.6	28.5	survey	13.3		47.5	14.1	21.7	22.0	26.3
	Date of Survey		2/12 2/15	2/14	5/2t 2/2	2/15 2/15	2/14	2/14	5/1 4		ns oN			2/15	2/15	2/15	2/15	
	Elev.		6200	7100	7350	7100	6500	6930	7300	7500	7630			8400	7500	7350	7100	
	Rge•		3w 6w	2E	8E	つ 日 日	7E	8E	8臣	85	9臣			3E	7E	王9	3E	
	Twp.		14N 16N	15N	18N 22N	22N	18N	18N	19N	18N	17N			33N	30N	22N	22N	
NC	Sec.		32	· m	13	27	7	19	53	77	30		뀨	34	7	22	27	
IOCATION	No.		η α	3	7 4	~ ~	∞	6	10	11	12		O RIVI	~	N	2	9	
I	DRAINAGE BASIN and SNOW COURSE	VERDE RIVER	Iron Springs Camp Wood	Mingus Mt.	Mormon Lake	Chalender	Munds Park	Casner Park	Antelope Fark	Mormon Mt.	Happy Jack	Average	LITILE COLOHADO RIVIR	Bright Angel	Grand Canyon	Fort Valley	Chalender	Average

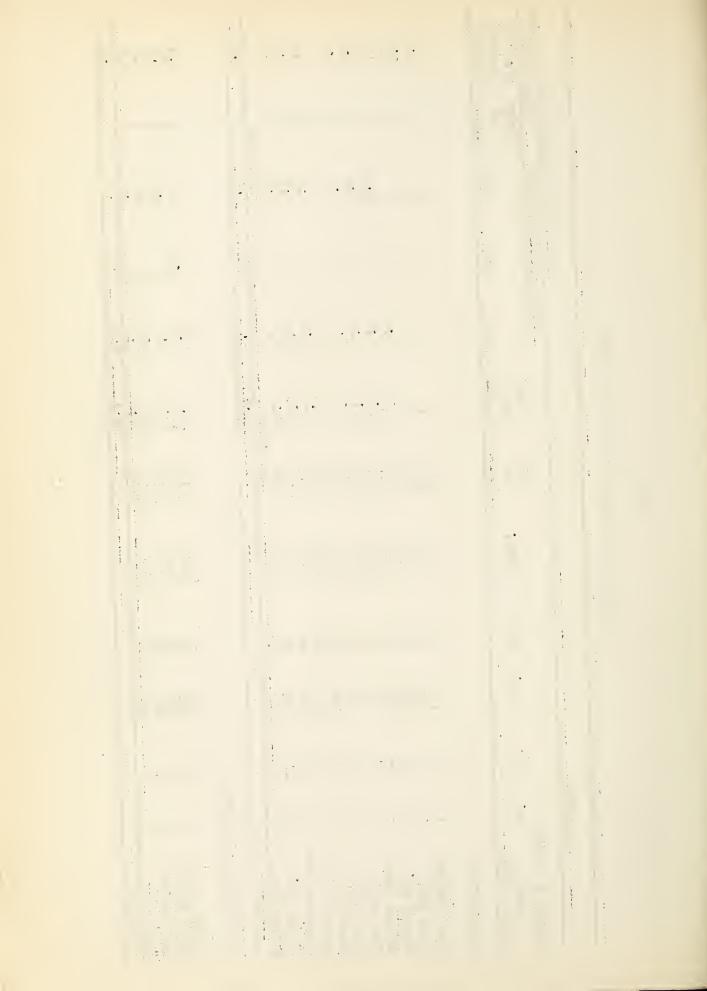


TABLE 2
STATUS OF RESERVOIR STORAGE, FEBRUARY 15, 1952

BASIN and	RESERVOIR	USABLE CAPACIT		THOUSANDS ACRE FEET IN STORAGE About Feb. 15								
STREAM		(1000 A.	F.) 1952	1951	1951 1950		10 yr.Avg 1941-50					
Agua Fria	Lake Pleasant	178	119	0	6	18	18					
Colorado	Lake Mohave	1,810	1,593	1,402	-	-	-					
Colorado	Lake Havasu	638	611	621	625	572	558					
Colorado	Lake Mead	27,935	17,006	17,434	18,571	18,563	19,554					
Gila	San Carlos	1,285	152	0	94	162	238					
Verde	Bartlett	180	176	9	45	90	51					
Verde	Horseshoe	143	45	2	11	5	10 ^a					
Salt	Roosevelt	1,382	494	4	318	174	541					
Salt	Apache	245	186	170	228	107	196					
Salt	Canyon	58	43	49	34	23	29					
Salt	Saguaro	70	44	47	22	26	19					

a - Average for years 1946 through 1950



LIST OF SNOW SURVEYORS

SNOW COURSE SURVEYOR
Canyon Creek Goodwin, West
Gentry
Heber
Mingus Mountain M. F. Jones
Iron Springs E. Saxby
McNary Waggener, Declay
Forest Dale Waggener, Declay
Milk Ranch Waggener, Declay
Ft. Apache Goodwin, West
Baldy Goodwin. West
Maverick Fork Goodwin, West Beaver Head
Beaver Head B. Burke
Coronado Trail L. T. & F. E. Casanova
Nutrioso L. T. & F. E. Casanova
Bear Wallow Wan a Hughes
Rose Canyon Wm . Hughes
Mormon Mountain Greaves, Goodwin, West
Mormon Lake Greaves, Goodwin, West
Antelope Park Greaves, Goodwin, West
Casner Park Greaves, Goodwin, West
Ft. Valley Pat Loska
Chalender Oleson, Cochran
Grand Canyon Schulf
Bright Angel Valentine, Hall
Willow Ranch T. Miller
Camp Wood
Camp Wood
Workman Creek
Taylor Creek F. M. Inman
Inman F. M. Inman
Happy Look
Happy Jack Emil Ryberg
State Line J. B. Shumate
Frisco Divide J. B. Shumate

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The following organizations cooperate in the Arizona snow survey work:

FEDERAL

Department of Agriculture
Forest Service
Apache Forest
Coconino Forest
Coronado Forest
Gila Forest
Kaibab Forest
Prescott Forest
Sitgreaves Forest
Southwestern Forest and Range Expt.
Station, Fort Valley, Arizona
Sierra Ancha Experiment Forest Station

Soil Conservation Service
Division of Irrigation

Department of Commerce
Weather Bureau
Arizona Section

Department of Interior

Bureau of Reclamation

Region III

Geological Survey

Arizona District

Indian Service

Fort Apache Reservation

National Park Service

Grand Canyon National Park

Gila Water Commissioner Safford, Arizona

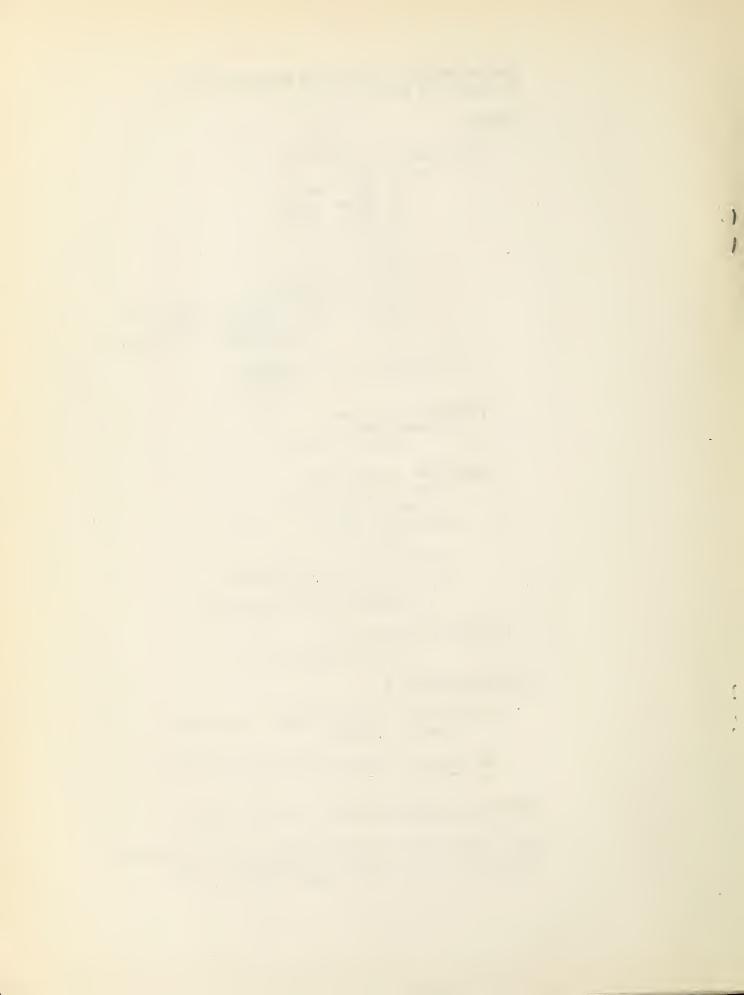
IRRIGATION PROJECTS

Salt River Valley Water Users' Association Phoenix, Arizona

San Carlos Irrigation and Drainage District Coolidge, Arizona

SOUTHWEST LUMBER MILLS, INC., McNary, Arizona

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.



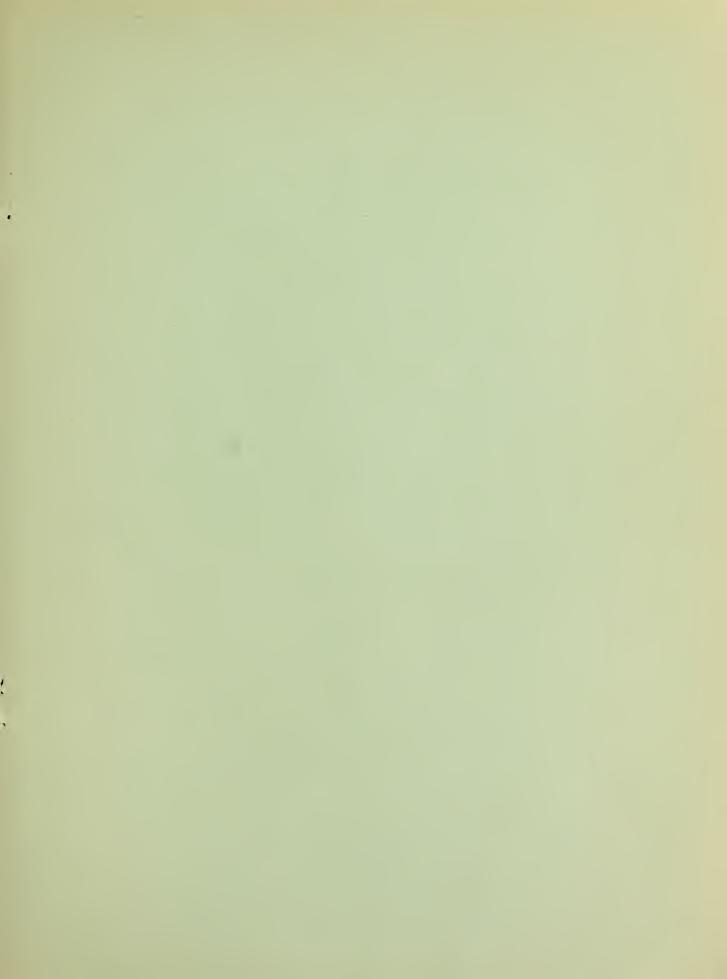
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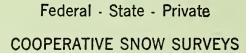
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